

## WIRE-COLLECTING DEVICE FOR COMPUTER ACCESSORIES

### FIELD OF THE INVENTION

[0001] The present invention relates to a wire-collecting device provided for containing a cable of a computer accessory and, more particularly, to a wire-collecting device capable of fastening a connector of the computer accessory.

### DESCRIPTION OF THE PRIOR ART

[0002] With the technological revolution in recent years, different types of personal computers (PCs), such as a desktop type, a notebook type or the like, have been well developed and commercially available in the marketplace.

[0003] Many computer systems, including personal computers, workstations, and servers are designed to have multiple peripheral devices included in the system. Generally, a typical personal computer system includes a processor, associated memory and control logic and a number of peripheral devices that provide input and output (I/O) for the system. Such peripheral devices include, for example, compact disk read-only memory (CD-ROM) drives, hard disk drives, floppy disk drives, and other mass storage devices such as magneto optical (MO) drives, compact disk recordable (CD-R) drives or digital video/versatile disk (DVD) drives.

[0004] The major method of expanding the functional ability of personal computers can be expressed as the following: the expansion apparatus is made to be external, and connects to the personal computer via a connection device, thereby increasing the functional ability of the personal computer.

[0005] So far, the connection device is generally a wire type that electrically connects to or communicates with the computer through a cable, such as a power cord, an USB cable, or an IEEE 1394 cable etc.

[0006] Referring to FIG.1, a conventional notebook computer **10** and a plurality of external accessories with wires are shown. The external accessories can be a CD-ROM **101**, a floppy disk drive **102**, a DVD drive **103**, a hard disk drive **104**, or a CD-R drive **105**. These accessories connect to the notebook computer **10** through different cables described above for expending the function of the notebook computer **10**.

[0007] It is noted that, however, cables mentioned above often lead to inconvenience in carrying portable accessories. In addition, optimum lengths of the cables are not easily to be adjusted while using the accessories. Further, the collection and storage of cables extending from accessories are annoying problems to users.

## SUMMARY OF THE INVENTION

[0008] Accordingly, an object of the present invention is to provide a wire-collecting device for storing cables of computer accessories.

[0009] Another object of the present invention is to provide a wire-collecting device capable of fastening cable connectors of computer accessories.

[0010] Another object of the present invention is to provide a wire-collecting device having an elastic element to facilitate the collection of cables of computer accessories.

[0011] Still another object of the present invention is to provide a computer accessory with a wire-collecting device.

[0012] A wire-collecting device of a computer accessory has a casing, a fastening device, and an elastic element. The casing has a first opening and a collecting portion inside the casing for containing a signal-transmission device extending from the computer accessory. The fastening device is positioned on a first interior surface of the casing, and the fastening device is positioned near the first opening to fasten the signal-transmission device. The elastic element has a first terminal and a second terminal. The first terminal of the elastic element is installed into a second interior surface of the casing, and the second terminal of the elastic element is connected to the signal-transmission device to force the signal-transmission device to draw back into the collecting portion.

## BRIEF DESCRIPTION OF THE DRAWINGS

[0013] The foregoing aspects and many of the attendant advantages of this invention will become more readily appreciated and understood by referencing the following detailed description in conjunction with the accompanying drawings, wherein:

[0014] FIG. 1 is a schematic diagram illustrating a conventional notebook computer with a plurality of wire-type external accessories;

[0015] FIG. 2 is a side view of a wire-collecting device coupled to an external computer accessory in accordance with the present invention;

[0016] FIG. 3 is a perspective view of the wire-collecting device in accordance with the present invention;

[0017] FIG. 4 is a side view of a fastening device constructed on an interior surface of a casing in accordance with the present invention;

[0018] FIG. 5 is a perspective view of the wire-collecting device, showing the helical cable being clasped by a trench in accordance with the present invention; and

[0019] FIG. 6 is a perspective view of the wire-collecting device, showing a connector of the helical cable being contained in a recess in accordance with the present invention.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0020] The invention disclosed herein is directed to a wire-collecting device provided for computer accessories, especially for external computer accessories. Much more specifically, the invention is directed to a wire-collecting device capable of fastening a cable connector of the external computer accessory. In one preferred embodiment of the present invention, the wire-collecting device is coupled to the computer accessory. In another embodiment, the wire-collecting device is fabricated to one piece with the computer accessory. The preferred embodiment of the present invention is now described in detail below.

[0021] Referring to FIG. 2, an external computer accessory **20** coupled with a wire-collecting device **30**, e.g. CD-ROM, CD recorder, DVD drive, hard disk drive, floppy disk drive, scanner, printer or digital camera, is shown. The computer accessory **20** has a signal-transmission device (not shown). The wire-collecting device **30** is preferably coupled to the computer accessory **20**. In another embodiment, however, the wire-collecting device **30** is formed to one piece with the computer accessory **20**.

[0022] Referring to FIGS. 3-5, the wire-collecting device **30** has a casing **301**, an elastic element **302** and a fastening device **303**. The casing **301** includes a first opening **3011**, a cover **3012** and a collecting portion **3013**. The cover **3012** is supplied to swing between open and closed positions relative to the first opening **3011**. The fastening device **303** is positioned on a first interior surface **3015** of the casing **301**. The signal-transmission device includes a cable **201** and a connector **202**. The collecting portion **3013** inside the casing **301** is provided to contain the cable **201** extending from the computer accessory **20**. A first terminal of the elastic element **302** is installed into a second interior surface **3014** of the casing **301**, and a second terminal of the elastic element **302** is connected to the cable body. In a preferred embodiment of the present invention, the second terminal of the elastic element **302** hooks the cable **201**. In addition, the elastic element **302** is a spring, and the second interior surface **3014** is opposite to the first opening **3011**. The fastening device **303** constructed on the first interior surface **3015** of the casing **301** is located near the first opening **3011**.

[0023]

[0024] Referring to the FIG. 4, the fastening device **303** includes a recess **3031** and a second opening **3032**. The recess **3031** is provided to clasp the connector **202** of the signal-transmission device, and the second opening **3032** enables the cable **201** to pass through. In a preferred embodiment of the present invention, the cable **201** is a helix cable **201**. The second opening **3032** is wider than the diameter of the cable **201** and the second opening **3032** is narrower than the connector **202**. The width of the second opening **3032** is smaller than a diameter of the helix cable **201** so as to clamp the helical cable while the computer accessory **20**. The recess **3031** is wider than the connector **202**.

[0024] Referring to FIG. 5, the signal-transmission device of the computer accessory **20** includes the cable **201** and the connector **202**. When a user use the computer accessory **20**, the connector **202** is drawn out of the recess **3031** firstly. Next, the cable **201** is pulled out of the fastening device **303**. The cable **201** is removed back into the recess **3031** and clamped into the second opening **3032** after adjusting an optimum length thereof.

[0025] Referring to FIG. 6, the cable **201** is pulled up to leave the fastening device **303** after using. Subsequently, the cable **201** is forced to draw back into the collecting portion **3013** of the casing **301** by the elastic element **302**. The cable **201** is removed into the recess **3031** by passing through the second opening **3032**. Finally, the connector **202** is clasped into the recess **3031**.

[0026] Referring back to FIG. 4, a distance from an interior top surface of the casing **301** to the first interior surface **3015**, i.e. the distance between P and P', is greater than a diameter of the helix cable aforementioned, thus an optimum length of the cable **201** is easily adjusted when the computer accessory **20** is used by a user.

[0027] The connector **202** is easily to be pulled out of the recess **3031** when the computer accessory is prepared to be used because the connector is clasped and extruded from the recess **3031**. In addition, the wire-collecting device **30** can be manufactured into one piece with the computer accessory, so the manufacturing cost can be reduced. Further, cables of computer accessories are collected and stored in the wire-collecting device while these computer accessories are not in use, these cables will not engage with each other easily.

[0028] While the preferred embodiment of the invention has been illustrated and described, it is appreciated that various changes and modifications can be made therein without departing from the spirit and scope of the invention.